

Remarks

Applicants thank the Examiner for indicating allowable subject matter in claims 18-26 of the present application. The Office Action rejected claims 1-6 and 10-15 under 35 U.S.C. § 102(e) as anticipated by U.S. Published Application No. 2001/0002451 by Breed (“Breed” herein). The Office Action also rejected claims 7-9, 16, 17, and 27-33 as obvious under 35 U.S.C. § 103(a) over a combination of Breed and U.S. Patent No. 6,330,499 to Chou et al.

Applicants, in this response, clarify certain claim terms by the amendments above, which are not believed to narrow the scope of those claims. Applicants also traverse the rejections under §§ 102, 103 and request reconsideration of the application as amended.

Claims 2-9 have been amended to depend (directly or indirectly) from new claim 34, which recites (among other things) “producing an interrogation signal that includes a selection from among the plurality of data points; [and] responding to the interrogation signal with the selected data points” Neither Breed nor Chou shows or suggests this cost-efficient data transfer method, and it is, therefore, believed that claims 34 and 2-9 are in condition for allowance.

Claims 2, 3, 5, and 7 have been amended to change their respective dependencies, and claim 9 has been amended to clarify its terms. With these clarifying changes, claims 2-9 are believed to be in condition for allowance.

Claim 10 recites, among other things, “a second number of semi-passive RF tags, coupled to the first number of sensors effectively to transmit the data signals [indicative of one or more operating parameters of a machine], where the second number is at least one;” In discussing this element of claim 10, the Office Action cited Breed, paragraphs 0094, 0139, 0144-45, 0149,

0165-69, and 0121¹, but those paragraphs relate to sensor types and data processing, not RF tags. One of the paragraphs cited in relation to the “data collection device” element of claim 10, Breed paragraph 0182, is exemplary of Breed’s discussion of RF technology. That paragraph suggests all-or-nothing alternatives, where sensors are powered either by wire from the system power or completely by taking power from an RF signal (see lines 11-14 of Breed paragraph 0182). Breed neither shows nor suggests an intermediate alternative, “semi-passive RF tags” as recited in claim 10. In some embodiments, this alternative provides advantages of wireless data transmission without the expense or hassle of wired power and the weaker signals of passive tags. It is respectfully submitted that the “second number of semi-passive RF tags” recited in claim 10 are neither shown or suggested by Breed, and that claims 10-15 are patentable over that reference.

In addition, claim 15 recites that “the second number [of semi-passive RF tags] is less than the first number [of sensors].” No additional citation to specific portions of Breed were included in relation to this claim, and the undersigned has found no showing or suggestion of linking sensors with tags (per parent claim 10) so that there are more sensors than tags, but all sensor data is available through the tags (per claim 15). Because of this missing element, it is respectfully submitted that claim 15 is patentable over the cited references.

As mentioned above, claims 7-9, 16-17, and 27-33 were rejected as obvious over the combination of Breed and Chou. With regard to this rejection, Applicant notes the requirements stated in the MPEP for a prima facie case of obviousness under 35 U.S.C. § 103(a):

¹ Paragraph 0121 of Breed is a single entry in a list, and it is not understood how that entry relates particularly to this element. The apparent reasoning underlining the rejections for the remaining paragraphs is relatively clear.

[T]he examiner should set forth in the Office action:

- (A) the relevant teachings of the prior art relied upon, preferably with reference to the relevant column or page number(s) and line number(s) where appropriate,
- (B) the difference or differences in the claim over the applied reference(s),
- (C) the proposed modification of the applied reference(s) necessary to arrive at the claimed subject matter, and
- (D) an explanation why one of ordinary skill in the art at the time the invention was made would have been motivated to make the proposed modification.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See MPEP § 2143 - § 2143.03 for decisions pertinent to each of these criteria.

The initial burden is on the examiner to provide some suggestion of the desirability of doing what the inventor has done. "To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references." *Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985). (MPEP § 706.02(j); some citations omitted.)

It is also noted, however, that no suggestion is presented in the art to "utilize the remote service center of Chou et al. with the diagnostic system of Breed because such combination would enhance the diagnostic system of the vehicle by detecting a potential malfunction early and transferring it to the remote station for assistance, repair, or maintenance." (Office Action at 5.) Given the diagnostic system of Breed (the starting point for the obviousness analysis in the Office Action), one already has a complete diagnostic system on board the vehicle. One skilled in the art has no motivation to "enhance the diagnostic system ... by detecting a potential malfunction early and transferring it to [a] remote station" since diagnosis is made in the on

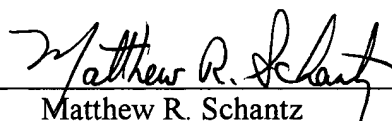
board diagnostic module 170 (see Breed paragraphs 0145, 0149-0173, and 0180 in particular).

Because motivation to combine the cited references is missing from the art, the Office Action has omitted the first of the “three basic criteria” necessary to establish a prima facie case of obviousness per MPEP § 706.02(j). Applicants respectfully request that the rejection of the several claims over the combination of Breed and Chou be withdrawn.

Applicants further note that claim 17 recites a method “wherein the first number [of on-board parameters] is greater than the second number [of parameters sent to a remote receiver].” Applicants’ representative finds no showing in either cited reference of *selectively* sending acquired operating parameters to a remote processor, i.e., so that a selected (proper) subset is transmitted. Because of this missing element, Applicants request that the rejection of claim 17 be withdrawn.

In light of the Remarks and Amendments above, Applicants respectfully request that the Examiner reconsider the rejections presented in the Office Action and promptly issue a Notice of Allowance of this application. The Examiner is invited to call or fax the attorney listed below should there be any questions that could be resolved by a telephonic interview.

Respectfully submitted,

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